

IN THE DRAWINGS

Page 3/5 of the Drawings has been amended and included as Replacement Sheet 3/5.

Specifically, Figure 4 has been amended to be labeled Figure 4A and new Figure 4B has been added to depict a cross section of element 1 in Figure 4A. No new matter has been added to the Drawings.

REMARKS

Claims 1 and 8 have been amended. Specifically, claim 1 has been amended to include that the rollers are “for supporting the object at only both ends of the object.” Support for the amendment may be found on page 7, lines 5-8 stating, “free rollers ... [support] the object so that only both ends of the object in a direction of width thereof is movable in a transferring direction...” In addition, claim 1 has been amended to clarify that the push-pull member is capable of pushing and pulling the object “between the heating and cooling chambers, wherein push-pull member is of a length such that when a rearmost end of the push-pull member comes to a position close to a first side of heating chamber, a frontmost end of the push-pull member arrives at a position located inside the cooling chamber.” Support for the amendment may be found on page 16, lines 3-11 describing the push-pull member. The specification has been amended to clarify “the left, or first, side of heating chamber.”

Claim 8 has been amended to depend from claim 1.

The Drawings have been amended to change Figure 4 to Figure 4A and add new Figure 4B to show “a plurality of free rollers ... for supporting the object at only both ends in a direction of width.”

A. The Objections/Rejections

The Examiner objected to the drawings for allegedly not showing every feature of the invention specified in the claims. Specifically, the Examiner requires that “a plurality of free rollers disposed within the heating and cooling chambers, respectively, and for supporting the object at only both ends in a direction of width must be shown or the feature(s) canceled from the claim(s).” Accordingly, Figure 4B has been added to show this feature.

Claims 1-7 were rejected under 35 U.S.C. §112 second paragraph, as being indefinite because in claim 1, the meaning of “at only both ends” is allegedly unclear.

Claims 1, 2, and 5-8 were rejected under 35 U.S.C. §102(a) because the invention is allegedly described in US Patent No. 5,052,923 to Peter et al. (hereafter “Peter”).

Claim 8 is also rejected under 35 U.S.C. §102(b) because the invention is allegedly described in U.S. Patent No. 4,518,353 to Banno et al. (hereafter “Banno”).

Claims 1-8 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,530,780 to Mori (hereafter “Mori”) in view of U.S. Patent No. 2,731,127 to Harrison (hereafter “Harrison”). The Examiner alleges that Mori discloses the elements of these claims except for specifically teaching a drive unit positioned adjacent the heating chamber. However, the Examiner alleges that Harrison teaches that it is well known in the art to use a conveyor transfer mechanism as a drive unit for the purpose of transferring loads in a continuous system. Thus, the Examiner states that it would have been obvious to have modified the transfer unit of Mori to include the conveyor transfer mechanism as taught by Harrison for the purpose of driving the push-pull device to move an object into and out of the heating and cooling chambers.

B. Applicant’s Arguments

Applicant respectfully asserts that in view of the present amendments, each and every feature of the claims is shown in the drawings. In addition, Applicant respectfully asserts that the amendment to claim 1 clarifies the meaning of “at only both ends” to mean “at only both ends of the object.”

35 USC §102(b)

Anticipation under 35 U.S.C. § 102 requires showing the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick, 221 U.S.P.Q. 481, 485 (Fed. Cir. 1984). In this case, the Examiner has failed to establish a prima facie case of anticipation against claim 1 because the Peter Patent fails to teach, or even suggest, each and every element of claim 1. For example, the Peter Patent does not teach or suggest “a push-pull member capable of moving while being engaged with the object thereby pushing or pulling the object between the heating and cooling chambers, wherein the push-pull member is of a length such that when a rearmost end of the push-pull member comes to a position close to a first side of heating chamber, a frontmost end of the push-pull member arrives at a position located inside the cooling chamber” as does claim 1 from which claims 2-8 depend. While the Peter Patent teaches a mounting bed 119 that allows movement of the object back and forth, the mounting bed 119 is not of a length such that when the rearmost end of the bed is close to a first side of the heating chamber, the frontmost end is located inside the cooling chamber. Unlike the push-pull member of claim 1, the mounting bed 119 is not long enough to extend into the cooling chamber when the rearmost end is close to the first side of the heating chamber.

Likewise, Applicant asserts that claim 8 as amended is not anticipated by Banno. Specifically, Banno, does not disclose “a push-pull member capable of moving while being engaged with the object thereby pushing or pulling the object between the heating and cooling chambers, wherein the push-pull member is of a length such that when a rearmost end of the push-pull member comes to a position close to a first side of heating chamber, a frontmost end of the push-pull member arrives at a position located inside the cooling chamber” as does claim 1 from which claim 8 depends. Rather, as see in Banno Figure 1,

Banno tray 64, which supports the object, is not long enough to extend into the cooling chamber when the rearmost end is close to the first side of the heating chamber.

The configuration of the present invention allows that during heating of the object within the heating chamber and during cooling thereof within the cooling chamber, push-pull member may be retracted to its waiting position on the left side of heating chamber 12. Accordingly, the respective chambers may be constantly maintained at a hermetic state and the transfer unit can be prevented from being subjected to any excessive heating.

35 USC §103(a)

A prima facie case of obviousness requires showing that the scope and content of the prior art teaches each and every element of the claimed invention. In re Oetiker, 24 U.S.P.Q.2d 1443 (Fed. Cir. 1992); In re Vaeck, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). In addition, to establish obviousness, it must be shown that a person of ordinary skill in the art would have had reason to attempt to make the composition or device, or carry out the claimed process, and would have had a reasonable expectation of success in doing so. Pharmastem Therapeutics, Inc. v. Viacell, Inc., 491 F.3d 1342, 1360 (Fed. Cir. 2007) (citing KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1740, 167 L.Ed.2d 705 (2007)).

In the present case, the Examiner has failed to establish a prima facie case of obviousness against the instant claims because neither Mori nor Harrison, alone or in combination, teach or suggest “a push-pull member capable of moving while being engaged with the object thereby pushing or pulling the object between the heating and cooling chambers, wherein the push-pull member is of a length such that when a rearmost end of the push-pull member comes to a position close to a first side of heating chamber, a frontmost end of the push-pull member arrives at a position located inside the cooling chamber” as does claim 1 from which claims 2-8 depend. The Examiner cites Mori for teaching the elements

of these claims except for specifically teaching a drive unit positioned adjacent the heating chamber. However, Mori, as the base device, does not disclose “a push-pull member ... of a length such that when a rearmost end of the push-pull member comes to a position close to a first side of heating chamber, a frontmost end of the push-pull member arrives at a position located inside the cooling chamber.” For example, Mori discloses a push-pull member 35, as shown in Figure 4, however, the member is not of a length as described in claim 1 of the present invention. Thus, since the base device is not disclosed by the cited reference, the Harrison patent cannot make up the deficiency with respect to independent claim 1 from which claims 2-8 depend.

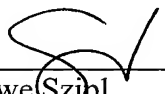
CONCLUSION

In view of the present amendment, Applicant respectfully asserts that claims 1-8 are in condition for allowance and a prompt notice of allowance is earnestly solicited.

The below-signed attorney for applicant welcomes any questions.

Respectfully submitted,

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3/5

3/5

Fig. 4

